

WE CLAIM:

1. Digital image processing apparatus for applying pixel-based colour correction to an input image to generate an output image, said apparatus comprising:
  - 5 colour correction logic arranged to provide two or more colour correction processes each having a respective associated locus in a colour space and a respective associated colour mapping operation;
    - said colour correction processes being arranged as a succession of processes so that the results of a colour correction process form the input to a next such process in said
 10 succession;
      - each colour correction process being operable to detect whether each pixel lies within said respective locus in colour space and, if so, to apply said colour mapping operation to that pixel; and
      - each colour correction process after a first process in said succession being arranged
 15 to inhibit colour mapping in respect of said loci associated with previous processes in said succession.
2. Apparatus according to claim 1, in which each of said colour correction processes is carried out by a separate colour correction processor.
- 20 3. Apparatus according to claim 1, in which said locus in colour space of at least one of said colour correction processes includes a soft region, said soft region being subject to a partial colour mapping operation.
- 25 4. Apparatus according to claim 3, in which said colour mapping operation of a subsequent process having a locus in colour space overlapping with said soft region is only partially inhibited in the region overlapping said soft region.
5. Apparatus according to claim 3, in which said degree of softness in a locus in colour
 30 space may vary between a first degree of softness, being indicative that no colour mapping will take place, and a second degree of softness, being indicative that complete colour mapping will take place.

6. Apparatus according to claim 5, in which colour mapping by a colour correction process is partially inhibited in respect of a region in colour space in which a sum of all degrees of softness relating to that region in previous processes in said sequence lies between said first and second degrees of softness.

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7. Apparatus according to claim 6, in which colour mapping in a process will be completely inhibited in respect of a region in colour space in which said sum of all degrees of softness relating to that region in previous processes equals or exceeds said second degree of softness.

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8. Apparatus according to claim 6, in which each process is operable to detect a running total degree of softness applied by preceding processes in respect of each position in colour space, and to apply colour correction to an extent no greater than a difference between said running total degree of softness and said second degree of softness.

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9. A method of digital image processing for applying pixel-based colour correction to an input image to generate an output image, said method comprising the steps of:

providing two or more colour correction processes each having a respective associated locus in a colour space and a respective associated colour mapping operation;

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said colour correction processes being arranged as a succession of processes so that said results of a colour correction process form an input to a next such process in said succession;

each colour correction process detecting whether each pixel lies within said respective locus in colour space and, if so, to apply said colour mapping operation to that pixel; and

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each colour correction process after said first process in said succession inhibiting colour mapping in respect of said loci associated with previous processes in said succession.

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10. Computer software having program code for carrying out a method according to claim 9.

11. A providing medium for providing software according to claim 10.

12. A medium according to claim 11, said medium being a transmission medium.

13. A medium according to claim 12, said medium being a storage medium.